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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Takemitsu Honda

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EXAMINER

LEUBECKER, JOHN P

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/814,078

Applicant(s)

HONDA ET AL.

Examiner

John P. Leubecker

Art Unit

3739

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

Claim Objections

1. Claim 24 is objected to because of the following informalities: as to claim 24, line 10, "to a the" should be --to the--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Siegel et al. (U.S. Pat. 688,009) for the reasons set forth in numbered paragraph 9 of the previous Office Action, paper number 20070515.

In Siegel et al., the current consuming device, or load, (page 1, col.1, lines 26-29) will cause the batteries to output a current in a "current value range". Inherently, with any battery, the larger the average current output, the smaller the discharge capacity. Taking the "range" to be the full range of currents that the battery is capable of supplying, then increasing the current drawn from the battery will inherently decrease the discharge capacity, thus meeting the claim language.

4. Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Vail (U.S. Pat. 4,101,787).

Vail discloses a power supply circuit including a first power unit (battery No.1), a second power unit (battery No.2) and a switch (2) that selectively connects any one of the first and

second power units to a load (16). Inherently, the larger the current that is drawn from the cell, the smaller the electric discharge capacity of the cell. As to claim 14, each power unit can be a plurality of cell connected in series (col.4, lines 1-2).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 15, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siegel et al. for the reasons set forth in numbered paragraph 11 of the previous Office Action, paper number 20070515.

As for claim 23, the combination including SR726SW cells was previously addressed with respect to claims 15 and 16. Since SR726SW cells are capable of outputting a current around 5mA, depending on the load connected to such cells, the obvious combination discussed above with respect to claims 15 and 16 would anticipate the capability of outputting a current approximately equivalent to 5mA.

7. Claims 15, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vail.

Vail, as described above, disclose batteries (or groups of batteries) in a generic sense and does not list all known batteries that could be used. Use of any known specific cell types with the power supply of Vail would not be considered invention but a mere obvious selection of one

out of many that are known. It would have been obvious to one of ordinary skill in the art to have used any known battery cells in the invention of Vail, including SR726SW cells, since use of the Vail device with such cells would desirably extend the life of such cells (col.2, lines 19-25). As to claim 23, the SR726SW cell is capable of outputting a current of 5mA.

8. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yaron (U.S. Pat. 7,116,352) in view of Siegel et al. for the reasons set forth in numbered paragraph 12 of the previous Office Action, paper number 20070515.

As explained above with respect to claims 13 and 14 with respect to the Siegel et al. reference, the larger the current value for any cell, the smaller the electric discharge capacity of the cell. Applicant's definition of an inherent function of a cell does not limit the "current range" of that cell since the relationship of the current to the electric discharge capacity applies to any current.

9. Claims 13-16 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iddan (U.S. Pat. 6,936,003) in view of Vail (U.S. Pat. 4,101,787).

With respect to claims 13, 15, and 20-22, Iddan disclose an in-body information acquiring apparatus (Fig.1B) comprising an image sensor (220), a communication unit (206,208) and a power supply (batteries 224A,224B). Iddan teaches that the batteries can be silver oxide batteries (col.6, lines 60-65). The Examiner takes the position that one would recognize that a silver oxide battery of the size contemplated by Iddan (in a capsule capable of being swallowed)

would be considered a "button cell". Inherently, the electrical discharge capacity of the batteries of Iddan decreases as the amount of current drawn from the cell increases.

Further with respect to claims 13 and 20, Iddan fails to disclose a switch that selectively connects any one of the batteries to a load (electrical components including the image sensor and communication unit) for a predetermined period of time. Vail teaches that it is known to alternatively couple with a switch (2) a first and second battery to a load for a short period of time (col.2, lines 12-19) and by doing so:

"the batteries will have a considerably longer life than if the batteries were connected so as to supply current at the same time or connected so that one of the batteries would supply all of the current until it was discharged and then the other battery would supply current" (col.2, lines 19-25).

It would have been obvious to one of ordinary skill in the art to have provided the switch system of Vail in the device of Iddan to extend the battery life, a desirable feature in any battery powered device.

As to claim 14, Iddan teaches that "one or more batteries 224A and 224B" can be used, which suggests that two separate cells can be considered one unit (e.g., in series). Vail teaches that "banks of batteries could be provided as the individual direct current sources" (col.4, lines 1-2). It would have been obvious to one of ordinary skill in the art to have used in the combination described above, two power supply units, with multiple cells in each unit (i.e., in series), operation of the switching of Vail, as applied to the load of Iddan, in no way depends on the number of cells used, as long as there are two units to switch between. Such use of multiple cells in each unit would provide the predictable result of allowing smaller sized cells to be used—

more smaller sized cells would allow more efficient placement in a small space than less larger sized cell.

As to claims 16, 23 and 24, Iddan in view of Vail teach every element of the claimed invention except for the specific battery type used. Since Iddan disclose use of "silver oxide" batteries, one of ordinary skill, when reducing such device to practice, would have to select a particular known cell. It would have been obvious to one of ordinary skill in the art o have chose a SR726SW cell, since such would provide the appropriate size and electrical characteristics required for a capsule imaging device. Further as to claims 23 and 24, the SR726SW cell is capable of outputting a current of 5mA and thus meets this limitation.

Response to Arguments

10. Applicant's arguments filed September 25, 2007 have been fully considered but they are not persuasive.

Applicant argues that the Siegel power supply is not the equivalent of Applicant's claimed invention because "it is not intended or operational to periodically switch power units (cells) because they are operated in a nominal current value range that is substantially higher than the specified output or nominal range of the power units (cells) it comprises". However, Siegel indeed is intended and operational to periodically switch power units (cells). This is the whole purpose of the Siegel device. In addition, there is no evidence in the Siegel disclosure that the Siegel invention is load-current dependent. In other words, Siegel does not specify that the cells have to operate at their "nominal" range and there is no evidence that the Siegel invention

that the cells could not operate in a higher current capacity. It appears that the Siegel (and Applicant's) switching device will extend battery life no matter what the load.

It is noted that the language added to claim 13 does not actually define that a higher current is being drawn than what is intended by the manufacturer. It does however define an inherent feature to all cells: the larger the current, the smaller the discharge capacity. It is not clear how this, according to Applicant, makes it non-obvious to use any particular known cell (such as the SR726SW cell) for the generic cells disclosed by Siegel et al. Thus, the Examiner has maintained this rejection.

As to the Yaron reference, Applicant argues that the elements in Yaron's capsule are not equivalent to Applicant's claimed "function executing unit". The Examiner can not address this because it 's not understood. Applicant only specifies in the claims an image sensor and wireless communication unit. Both of these are in Yaron. So why are they not equivalent? The Examiner requests a further explanation of this.

Further as to Yaron, Applicant feels that since the inventors of the Yaron device "were not challenged to find a reduction in size of the battery source", then it can not be obvious to use a circuit, such as disclosed by Siegel et al., to improve on the Yaron device. Unfortunately for Applicant, there are many other factors that are used to evidence a prima facie case of obviousness. The Examiner takes the position that a prima facie case has been set forth. In addition, although Yaron does not specifically teach that the battery is not a plurality of cells, a plurality of cells is taught by Siegel et al.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Leubecker whose telephone number is (571) 272-4769. The examiner can normally be reached on Monday through Friday, 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Leubecker/
Primary Examiner
Art Unit 3739

jpl